

OLD DRAWINGS

Gag_AF110965_BW_mod

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ATGGGCAGCCCGCGCCAGCATCCTGCGCGEGGCAAGCTGGACGCCCTGGAGCGCATCCGCC
TGCAGCCCGGGCGGCAAGAAGTGTACATGATGAAGCACCTGGTGTGGGCCAGCCGAGCT
GGAGAAGTTGCCCTGAACCCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATCATC
CGCCAGCTGCACCCCGCCCTGCAGACCGGCAGCGAGGGAGCTGAAGAGGCTGTTAACACCG
TGGCCACCCCTGTACTGCGTGCAOGAGAAGATCGAGGTCCCGCACACCAAGGAGGCCCTGGA
CAAGATCGAGGAGGAGCAGAACAGTGCAGCAGAAGATCCAGCAGGCCAGGCCGCCGAC
AAGGGCAAGGTGAGCCAGAACATACCCATCGTCAGAACCTGCAGGCCAGATGGTGCACC
AGGCCATCAGCCCCCGCACCCATGAAACGCCCTGGGTGAAGGTGATCGAGGAGAAGGCCCTCAG
CCCCGAGGTGATCCCCATGTTCACCGCCCTGAGCGAGGGGCCACCCCCCAGGACCTGAAC
ACGATGTTGAACACCGTGGCGGCCACCAGGCCCATGCAGATGCTGAAGGACACCATCA
ACGAGGAGGCCGCOGAGTGGGACCGCGTGCACCCCGTGCACGCCGGCCCATGCCCGG
CCAGATGCGCGAGCCCCCGCGCAGCGACATGCCGGCACCAAGCACCCTGCAGGAGCAG
ATCGCCTGGATGACCAGAACCCCCCATCCCCGTGGCGACATCTACAAGCGGTGGATCA
TCCTGGGCCTGAACAAGATCGCGGATGTACAGCCCCGTGAGCATCCTGGACATCAAGCA
GGGCCCCAAGGAGCCCTCCGCGACTACGTGGACCGCTTCTCAAGACCCCTGCAGGCCGAG
CAGAGCACCCAGGAGGTGAAGAACTGGATGACCGACACCCTGCTGGTGCAGAACGCCAAC
CCGACTGCAAGACCATCCCTGCCGCTCTGGCCCGCCAGCCTGGAGGAGATGATGAC
CGCCTGCCAGGGCGTGGCGGCCAGCCACAAGGCCCGCGTGCAGGCCGAGGCGATGAGC
CAGGCCAACACCAAGCGTGTGATGAGCAGAACCTCAAGGGCCCCGGCATCGTCA
AGTGCCTCAACTGCGCAAGGAGGGCCACATGCCCGCAACTGCCGCCGGCAAGAA
GGGCTGCTGGAAGTGCAGGCAAGGAGGGCCACCGATGAAGGACTGCACCGAGGCCAGGCC
AACTTCCTGGCAAGATCTGGCCAGCCACAAGGGCCGGCAACTCCTGCAGAGCC
GCCCGAGGCCACCGCCCCCGCCAGAGGCTCCGCTTGAGGAGACCACCCCGGCCA
GAAGCAGGAGAGCAAGGACCGCGAGACCCTGACCAGCCTGAAGAGGCCCTGTTGGCAACGAC
CCCCCTGAGCCAGTAA
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Figure 1

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ATGGGCGCCCGGCCAGCATCCTGCGGGCGAGAAGCTGGACAAGTGGAGAAGATCCGCC
TGCAGCCCCGGCGCAAGAACACTACATGCTGAAGCACCTGGTGTGGGCCAGCCGAGCT
GGAGGGCTTCGCCCTGAACCCCGGCCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATCATG
AAGCAGCTGCAGCCGCCCTGCAGACCGCACCAGGAGCTGCGCAGCCTGTACAACACCG
TGGCCACCCCTGTACTGCGTGCACGCCGCATCGAGGTCCCGACACCAAGGAGGCCCTGGA
CAAGATCGAGGAGGAGCAGAACAGTCCCAGCAGAACAGGCCAGCAGGCCAAGGAGGCCAG
GGCAAGGTGAGCCAGAACACTACCCCATCGTGCAGAACCTGCAGGGCCAGATGGTGCAGCAG
CCATCAGCCCCCGCACCCCTGAACGCCCTGGTGAAGGTGATCGAGGAGAACGCCCTCAGCCC
CGAGGTGATCCCCATGTTACCGCCCTGAGCGAGGGGCCACCCCCCAGGACCTGAACACG
ATGTTGAACACCGTGGCGGCCACCAGGCCATGCAGATGCTGAAGGACACCACATCAACG
AGGAGGCCGCCAGTGGGACCGCCTGCACCCCGTGCAGGCCGCCAGTGGGCCGCCAG
GATGCGCGACCCCCCGCGCAGCAGCATCGCCGGGCCACCAGCACCCCTGCAGGAGCAGATC
GCCTGGATGACCAGCAACCCCCCGTGCCTGGCGACATCTACAAGCGGTGGATCATCC
TGGGCTGAACAAGATCGTGCAGATGTCAGCCCCGTGAGCATCCTGGACATCCGCCAGGG
CCCCAAGGAGCCCTCCCGCAACTACGTGGACCGCTTCTCAAGACCCCTGCGCGCCAGCAG
GCCACCCAGGACGTGAAGAACTGGATGACCGAGACCCCTGCTGGTGCAGAACGCCAACCCCG
ACTGCAAGACCATCCTGCGCCTCTCGGCCCCGGCCACCCCTGGAGGAGATGACCGC
CTGCCAGGGCGTGGCGGGCCCCGGCCAAGGCCCGCTGCTGGCGAGGCAGTGGCCAG
GCCAACAGCGTGAACATCATGATGCAAGAGCAACTTCAAGGGCCCCGGCGAACGTCA
AGTGCCTCAACTGCGGCAAGGAGGGCACATGCCAAGAACATGCCGCCACCGCAAGAA
GGGCTGCTGGAAGTGCAGGCAAGGAGGGCACCAAGATGAAGGACTGCACCGAGGCCAGGCC
AACTTCTGGCAAGATCTGGCCAGCCACAAGGGCCGCCGGCAACTTCTGAGAAC
GCAGCGAGCCCCGGCCACCGTGCCTGCCACCGCCCCCGCCGAGAGCTCCGCTTCGA
GGAGACCACCCCCGGCCCCCAAGCAGGAGGCCAAGGACCGCGAGCCCTACCGCGAGGCCCTG
ACCGCCCTGCGCAGCCTGTTCGGCAGCGGCCCTGAGCCAGTAA

Figure 2

Fig. 3

Env_AF110968_C_BW_opt

--> signal peptide (1-81)

ATGCCGTGATGGGCATCCTGAAGAACTACCAGCAGTGGTGGATGTGGGCATCCTGGCTCTGGATGCTGATCA
\\--> gp120/140/160 (82)
TCAGCAGCGTGGTGGCAACCTGTGGGTGACCGTGTACTACGGCGTCCCCGTGTGGAAGGAGGCCAAGACCACCC
GTTCTGCACCAGCGACGCCAACGCCCTACGAGACCGAGGTGCACAAACGTGTGGCCACCCACGCCCTGCGTGCCACC
GACCCCAACCCCCAGGAGATCGTGTGGAGAACGTGACCGAGAACCTCAACATGTGGAAGAACGACATGGTGGACC
AGATGCACGAGGACATCATCAGCTGTGGGACCAAGGCCCTGAAGGCCCTGCGTGAAGCTGACCCCCCTGTGCGTGC
CCTGAAGTGCACGCCAACGTGAACGCCACCAACAAACATCAACAGCATGATGACAAACAGAACACAAGGGCGAGATGAAG
AACTGCAGCTCAACGTGACCAACCGAGCTGCGCGACCGCAAGCAGGAGGTGCACGCCCTGTTCTACCGCCTGGACG
TGGTGCCCTGCAGGGCAACAAACAGCAACGAGTACCGCCTGATCAACTGCAACACCCAGGCCATCACCCAGGCC
CCCCAAGGTGAGCTTCGACCCCATCCCCATCCACTACTGCACCCCCGCCGGCTACGCCATCCTGAAGTGCAACAAAC
CAGACCTTCAACGGCACCGGCCCTGCAACAAACGTGAGCAGCGTGCAGTGCGCCACGGCATCAAGCCGTGGTGA
GCACCCAGCTGCTGTAACGGCAGCGCCTGGCAAGGGCAGATCATCCGCAGCGAGAACCTGGCAACAAACG
CAAGATCATCATCGTGCAGCTGAACAAGCCGTGAAGATCGTGTGCGCCCAACAAACACCCGCAAGAGC
GTGCGCATGGCCCCGGCAGACCTCTACGCCACCGCGAGATCATGGCGACATCCGCCAGGCCACTGCGATCA
TCAACAAGACCGAGTGGAACAGCACCCCTGCAGGGCGTGAAGAACAGCTGGAGGAGCACTTCAGCAAGAACGGCAT
CAAGTTCGAGCCCAGCAGCGGGCGACCTGGAGATCACCACCCAGCTCAACTGCCCGGGAGTTCTTAC
TGCACACCAGCCAGCTGTTCAACAGCACCTACAGCCCCAGCTCAACGGCACCGAGAACAGCTGAACGGCACCA
TCACCATCACCTGCCCATCAAGCAGATCATCAACATGTGGCAGAAGGTGGCCCGCCATGTACGCCCTTAC
CGCCGGCAACCTGACCTGCGAGAGCAACATCACCGCCCTGCTGCTGACCCCGCACGGCGCAAGACCGCCCAAC
GACACCGAGATCTCCGCCCCGGCGGCCGACATGCGCAGACTGGCGAACAGCAGGCTGTACAAGTACAAGGTGG
gp120 (1512) <--\\--> (1513) gp41
TGGAGATCAAGCCCTGGCGTGGCCCCACCGAGGCCAACGCCCGTGGTGGAGCGCAGAACGCC
CATCGCGCCGTGTTCTGGGCTTCCTGGCGCCGCCGGCAGCACCATGGCGCCGCCAGCATCACCTGACCGTG
CAGGCCCGCCGTGCTGCTGAGCGCATCGCAGCAGAACACCTGCTGCGGCCATCGAGGCCAGCAGCACC
TGCTGCAGCTGACCGTGTGGGCATCAAGCAGCTGCAAGACCCGATCCTGGCGTGGAGCGTACCTGAAGGACCA
GCAGCTGCTGGCATCTGGGCTGCAGCGAACGCTGATCTGACCCCGCTGCCCTGGAACAGCAGCTGGAGC
AACCGCAGCCACGACGAGATCTGGACAACATGACCTGGATGCAGTGGACCGCGAGATCAACAACTACACCGACA
CCATCTACCGCCTGCTGGAGGAGGCCAGAACCCAGCAGGAGAACAGAGAACGGACCTGCTGCCCTGGACAGCTG
gp140 (2025) <--\\-->
GCAGAACCTGTGGAACTGGTCAGCATACCAACTGGCTGTGGTACATCAAGATCTTACATGATGTGGCGGC
CTGATCGGCCGTGCCATCATCTCGCGTGTGAGCATCGTAACCGCGTGCGCCAGGGCTACGCCCTGCC
TCCAGACCCCTGACCCCAACCCCGCGAGCCGACCGCCCTGGGCCATCGAGGAGGGCGAGCAGGACCG
CGGCCGAGCATCGCCGTGGTGGCGCTTCCCTGGCCCTGGCCTGGGACCTGCGCAGGCCCTGCTGTCAG
TACCAACCGCCGTGCCGACTTCATCCTGATCGCCGCCCGTGTGGAGCTGCTGGGCCAGGCCGCTGGAGGCC
TGAAGTACCTGGCAGCCTGGTGCAGTACTGGGCTGGAGCTGAAGAACAGCGCCATCAGCCTGCTGGACACCAT
CGCCATCGCCGTGGCCGAGGGCACCGACCGCATCGAGTTCATCCAGCGCATCTGCCGCCATCGAACACATC
gp160, gp41 (2547) <--\\-->
CCCCGCCGATCCGCCAGGGCTCGAGGCCGCCCTGCAGTAA

Fig. 4

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--> **signal peptide (1-72)**
ATGCGCGTGC CGGGCATCCTGCGCAGCTGGCAGCAGTGGTGGATCTGGGCTCTGGATCTGCAGCG
gp120/140/160 (72)
GCCTGGCAACCTGTGGGTGACCGTGTACGACGGCTGCCGTGTGCCCGAGGCCAGCACCAACCTGTTCTGCC
CAGCGACGCCAAGGCCAACGAGCTACGAGAAGGAGGTGCACAAACGTGTGGGCCACCCACGCCCTGCGTGCCACCGACCCAAAC
CCCCAGGAGATCGAGCTGGACAACGTGACCGAGAACTCAACATGTGAAGAACGACATGGTGGACCAGATGCACG
AGGACATCATCAGCCTGTGGGACAGAGCCTGAAGCCCCCGCTGAAGCTGACCCCCCTGTGCGTGCCCTGAAGTG
CACCAACTACAGCACCAACTACAGCAACACCATGAACGCCACCAGCTACAACAACACCACCGAGGAGATCAAG
AACTGCACCTCAACATGACCAACCGAGCTGCCGACAAGAACGAGCAGCAGGTGTACGCCCTGTTCTACAAGCTGGACA
TCGTGCCCTGAACAGCAACAGCAGCGAGTACCGCCTGATCAACTGCAACACCAGGCCATCACCCAGGCCCTGCC
CAAGGTGAGCTCGACCCCATCCCCATCCACTACTGCCCCCCGCCGTACGCCATCCTGAAGTGCAAGAACAC
ACCAGCAACGGCACCGGCCCTGCCAGAACGTGAGCACCGTGCAGTGACCCACGCCATCAAGGCCGTGGTGAGCA
CCCCCCTGCTGCTGAACGGCAGCCTGGCCAGGGCGCCGAGATCATCATCCGCAGCAAGAACCTGAGCAACAAACG
CTACACCATCATCGTGCACCTGAACGACAGCGTGGAGATCGTGTGCAACCGGCCAACAAACAACACCCGCAAGGC
ATCCGCATCGGCCCCGGCCAGACCTCTACGCCACCGAGAACATCATCGGCACATCCGCCAGGCCACTGCAACA
TCAGCGCCGGCGAGTGGAAACAAGGCCGTGCAGCGCGTGAGCGCCAAGCTGCGCGAGCAGTCCCCAACAAAGACCAT
CGAGTTCAGCCCCAGCAGCGCGGCCACCTGGAGATCACCACCCACAGCTTCAACTGCCGCCAGTGGAGTTCTTCTAC
TGCAACACCAGCAAGCTGTTCAACAGCAGCTACAACGCCACCAGCTACCGCGCACCGAGAGCAACAGCAGCATCA
TCACCCCTGCCCTGCCGCATCAAGCAGATCATCGACATGTGGCAGAAGGTGGGCCGCATCTACGCCCCCCCAT
CGAGGCAACATCACCTGCAGCAGCAGCATCACCGCCGTGCTGCCCGCACGGCGGCCCTGGACAACATCACC
ACCGAGATCTTCGCCCTAGGGCGGCACATGAAGGACAACCTGGCGCAACGAGCTGTACAAGTACAAGGTGGTGG
gp120 (1509) <--\--> (1510) gp41
AGATCAAGCCCCCTGGCGTGGCCCCACCGAGGCCAACGCCCGCGTGGTGGAGCGCGAGAACGCCCGTGGCAT
CGGCCCGTGTCTGGCGCCATCGCAGCAGCACCTGCTGCCGCATCGAGGCCAGCAGCACATGC
TGCAGCTGACCGTGTGGGCATCAAGCAGCTGCAGGCCCGTGCTGGCCATCGAGCGCTACCTGAAGGACAGCA
GCTGCTGGGCATCTGGGCTGCAAGCTGATCTGACCAACCCGTGCCCTGGAACAGCAGCTGGAGCAAC
AAGACCCAGGGGAGATCTGGGAGAACATGACCTGGATGCAGTGGACAAGGAGATCAGCAACTACACCGGCATCA
TCTACCGCCTGCTGGAGAGGCCAGAACACAGCAGGAGCAGAAGCAGAGACAGGCCCTGGACAGCCCAA
gp140 (2022) <--\--> (2023) gp41
CAACCTGTGGAGCTGGTCAACATCAGCAACTGGCTGTGGTACATCAAGATCTTCACTGATCGTGGGCCCTG
ATCGGCCCTGCCGCATCATCTCGCCGTGCTGAGCATCGTAACCGCGTGCAGGCCAGGGCTACAGGCCCTGAGCTTCC
AGACCCCTGACCCCAACCCCGCGGCCCTGGACCGCCCTGGCCGCATCGAGGAGGAGGGCGCGAGCAGGCCGA
CCGCAGCATCCGCCTGGTGCAGGGCTTCTGGCCCTGCCCTGGACCTGCCAGCAGGCCCTGTGCCCTGTTCACT
CACCGCCCTGCCGCACCTGATCTGGTACCCGCCGCGTGGAGCTGCTGGGCCGCAGCAGGCCCTGCCCTG
AGCGCGCTGGAGGCCCTGAAGTACCTGGCAGCCTGGTGCAGTACTGGGCCCTGGAGCTGAAGAACAGGCCAC
CAGCCTGCTGGACAGCATGCCATGCCGTGGCGAGGGCACCGACCGCATCGAGGTGATCCAGCGCATCTAC
gp160, gp41 (2565) <--\-->
CGCGCCTCTGCAACATCCCCGCCCGCGTGCAGGCCAGGGCTTCGAGGCCCTGCAGTAA

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ATGGGGCGCCCGCGCCAGCATCCTGCGCGGGCGAAGCTGGACGCCCTGGGAGCGCATCCGCCTGCGCCCCGG
CGGCAAGAAGTGTACATGATGAAGCACCTGGTGTGGGCCAGCCGAGCTGGAGAAGTTGGCCCTGAACC
CCGGCCTGCTGGAGACCAGCGAGGGCTGCAAGCAGATCATCCGCCAGCTGCACCCGCCCTGAGACCCGG
AGCGAGGAGCTGAAGAGCCTGTTCAACACCGTGGCCACCCCTGTAAGTGCCTGCACGAGAAGATCGAGGT[G]
CGACACCAAGGAGGCCCTGGACAAGATCGAGGAGGAGCAGAACAGTGCCTGCAGAAGATCCAGCAGGCCG
AGGCCGCCGACAAGGGCAAGGTGAGCCAGAACTACCCCATCGTGCAGAACCTGCAGGGCCAGATGGTGCAC
CAGGCCATCAGCCCCCGCACCCCTGAACCCCTGGGTGAAGGTGATCGAGGAGAACGGCCTTCAGCCCCGAGGT
GATCCCCATGTTACCGCCCTGAGCGAGGCCACCCCGAGGACCTGAACACCATGCTGAACACCGTGG[G]
GCGGCCACCAGGCCCATGCAAGATGCTGAAGGACACCATCAACGAGGAGGCCAGTGGGACCGCGTG
CACCCCGTGCACGCCGGCCCCATGCCCGGCCAGATGCGCGAGCCCCGGCAGCGACATGCCGGCAC
CACCAAGCACCTGCAGGAGCAGATGCCCTGGATGACCAGCAACCCCCCATCCCCGTGGCAGACATCTACA
AGCC[G]GGATCATCCTGGGCTGAACAAGATCGTGC[G]ATGTACAGCCCCGTGAGCATTGACATCAAG
CAGGGCCCCAAGGAGCCCTCCGCGACTACGTGGACCGCTTCAAGACCCCTGCGCGCCAGCAGAC
CCAGGAGGTGAAGAACTGGATGACCGACACCCCTGCTGGTGCAGAACGCCAACCCCCACTGCAAGACCATCC
TGCGCGCCCTGGGCCGGCGCAGCCTGGAGGAGATGATGACCGCCCTGCCAGGGCGTGGGCCCGCAGC
CACAAAGGCCCGCGTGGCCAGG[G]ATGAGCCAGGCCAACACCAGCGTGTGATGAGAAGAGCAACTT
CAAGGGCCCCCGCCATCG[G]AAGTGTCTCAACTGCGCAAGGAGGCCACATGCCCGCACTGCCCG
CCCCCGCAAGAAGGGCTGCTGGAAGTGCAGCAAGGAGGCCACCAAGATGAAGGACTGCACCGAGCGCCAG
GCCAACTTCTGGCAAGATCTGGCCCAGCCACAAGGGCCGCCCCGGCAACTTCTGCAGAGCCGGCGA
GCCCAACCGCCCCCGCCAGAGCTCCGCTCGAGGAGACCACCCCGGCCAGAAGCAGGAGAGCAAGG
ACCGCGAGACCCCTGACCGCTGAAGAGCCTGTTGGCAACGACCCCTGAGCCAGTAA

Figure 5

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ATGGGCGCCCGCGCCAGCATCTGCGCGAGAAGCTGGACAAGTGGAGATCCGCCTGCCGCCCCGG
CGGCAAGAAGCACTACATGCTGAAGCACCTGGTGTGGGCCAGCCCGAGCTGGAGGGCTTCGCCCTGAACC
CCGGCCTGCTGGAGACCGCCGAGGGCTGCAAGCAGATCATGAAGCAGCTGCAGCCGCCCTGCAGACCGGC
ACCGAGGAGCTGCCAGCCTGTACAACACCGTGGCACCCCTGTACTGCGTGCACGCCGCATCGAGGTGCG
CGACACCAAGGAGGCCCTGGACAAGATCGAGGAGGAGCAGAACAGACCCAGCAGAAGACCCAGCAGGCCA
AGGAGGCCGACGGCAAGGTGAGCCAGAACTACCCATCGTGCAGAACCTGCAGGGCCAGATGGTGCACCAAG
GCCATCAGCCCCCGCACCCCTGAACGCCCTGGTGAAGGTGATCGAGGAGAAGGCCCTCAGCCCCGAGGTGAT
CCCCATGTTCACCGCCCTGAGCGAGGGGCCACCCCCCAGGACCTGAACACCATGCTGAACACCGTGGCG
GCCACCAGGCCGCATGCAGATGCTGAAGGACACCATCAACGAGGAGGCCCGAGTGGACCGCCCTGCAC
CCCGTGCAGGCCGGCCCGTGGCCCGGCCAGATGCCGACCCCCCGCGCAGCGACATGCCGCCAC
CAGCACCCCTGCAGGAGCAGATGCCCTGGATGACCAAGCAACCCCCCGTGGCCGTGGCGACATCTACAGC
GCTGGATCATCCTGGCCCTGAACAAGATCGTGCCTGATGACAGCCCGTGGACATCTGGACATCCGCCAG
GGCCCCAAGGAGCCCTCCCGACTACGTGGACCGCTTCAAGACCCCTGCCGCCGAGCAGGCCACCCA
GGACGTGAAGAACTGGATGACCGAGACCTGCTGGTGCAGAACGCCAACCCGACTGCAAGACCATCCTGC
GCGCCTGGCCCCGGGCCACCCCTGGAGGAGATGATGACCGCCTGCCAGGGCTGGCGGCCAC
AAGGCCCGTGTGGCGAGGGCTGAGGCCACAGCGTGAACATCATGATGAGAAGAGCAACTT
CAAGGGCCCCCGCAACGTCAAGTGTCAACTGCCAAGGAGGCCACATGCCAAGAACGTGCCCG
CCCCCGCAAGAAGGGCTGCTGGAGTGCAGCAAGGAGGCCACAGATGAAGGACTGCCACCGAGGCCAG
GCCAACTTCTGGCAAGATCTGGCCAGCCACAAGGGCCGCCAACTTCTGCAGAACCGCAGCGA
GCCGCCGCCACCGTGCCTGCCACCGGCCGCCAGAGGCTTCCGCTTCGAGGAGACCACCCCCGCC
CCAAGCAGGAGCCCAAGGACCGCAGCCCTACCGCAGGCCCTGCCAGCCCTGCCAGCCTGTTGGCAGC
GGCCCCCTGAGCCAGTAA

Figure 6